

Time Study Information

Introduction

I. Goals and Objectives

The Time Study Training course was designed to assist Community Rehabilitation Program (CRP) personnel with the technical and regulatory aspects of performance measurement for hourly rated workers. The primary objectives of this course are as follows:

- A. Instruct each participant how to develop:
 - 1. A valid and accurate job description.
 - 2. A valid and accurate task analysis.
- B. Instruct each participant how to:
 - 1. Relate all components of a production standard.
 - 2. Document the entire process of establishing production standards.
 - 3. Accurately compute commensurate wage computations.
- C. Complete all necessary documentation to meet Federal requirements.
- D. Apply key sections of the Fair Labor Standards Act to make your operation perform more efficiently.

II. Benefits of Time Studies

- A. Establishes a systematic understanding of job tasks.
- B. Facilitates the determination of the best method or practice of job or tasks.
- C. Aids in the development of training programs.
- D. Provides a benchmark to measure change in worker productivity. Commensurate wages can be used as a built-in reward system to adjust/ increase wages.

- E. Helps to identify labor costs; good business practice.
- F. Allows the CRP to establish a productivity factor for employees.
- G. Facilitates the paying of a commensurate wage.
- H. Provides a systematic way of documenting productivity and commensurate wages, and compliance with the Fair Labor Standards Act.
- I. Effective contract management (e.g., financial gains/losses, scheduling requirements based on productivity).

III. Uses of Time Studies

- A. Compliance tool for regulatory guidelines and laws.
- B. Rehabilitation tool:
 - 1. Training
 - 2. Evaluation
 - 3. Placement
- C. Management tool:
 - 1. Scheduling
 - 2. Budgets
 - 3. Tracking Systems

IV. Administrative Costs

- A. Payroll system to accommodate changes in method of payment.
 - 1. Computer software to support requirements.
 - 2. Quality checking all mathematical calculations for accuracy.
- B. Rehabilitation professional to maintain accurate documentation.

Clear documentation supporting that individuals are disabled for the work they perform.

- C. Maintaining accurate supervision while performing time studies.
- D. Tracking system to ensure time studies are performed every six months.

V. Cautions

- A. Staff learning curve
- B. Staff time and cost to conduct production standards and time studies
- C. System must be kept current and constantly reviewed
- D. Requires extensive documentation and communication among operations and the rehabilitation staff
- E. Requires extensive knowledge and understanding of job
- F. If time studies are done incorrectly:
 - 1. Possible back-wage liability
 - 2. Lost payroll dollars
 - 3. Low employee morale
 - 4. Potential bad PR or exposure in press or community
 - 5. Possible lawsuits

FAIR LABOR STANDARDS ACT and HOURLY RATES

I. Overview and Background

Over the past years, as a result of the conversion from manufacturing to services as a country, we have seen the need for hourly-rated evaluations where piece-rated evaluations or pre-determined time studies do not apply. In 1989, the Department of Labor released the Final Rule regulations that included several requirements for hourly-rated evaluations.

Jobs most often subject to hourly evaluations include:

Janitorial/Custodial

EXAMPLES: sweeping; mopping; restroom cleaning; vacuuming.

Grounds Keeping

EXAMPLES: moving; edging; trimming.

Food Service

EXAMPLES: cleaning tables, dishwashing, serving line set-up.

Commissary Shelf Stocking

EXAMPLES: shelf stocking; mopping; waxing; clean up.

Mail Service

II. Regulations – Title 29, Part 525 of the Code of Federal Regulations

Employment of Workers with Disabilities Under Special Certificates

Enforcement Agency: U.S. Department of Labor, Employment Standards Administration, Wage and Hour Division.

A. Special Sub-minimum Wage Certificate

An individual whose earning or productivity capacity is impaired to the extent that the individual is unable to earn at least the applicable minimum wage may be paid a commensurate wage, but **ONLY** after the employer has obtained a

Certificate authorizing payment of special minimum wages...[29 CFR, 515.5 (a)].

1. All applications are now processed through Chicago Wage and Hour Office.
2. Application process is every two years. (Two-year certificate)

B. Commensurate Wage Background

1. Objective measure to derive paying individuals with disabilities based on productivity.
2. Management tool to ensure awareness of how individuals are performing on the contract(s).
3. Financial loss may incur if there is not an awareness of “actual” workforce.

C. Definitions [29 CFR, Section 525.3 (h)]

1. Special Minimum Wage [29 CFR, Section 525.3 (h)]

A wage authorized under a certificate issued to an employer under this part [Part 525 Code of Federal Regulations] that is less than the statutory minimum wage.

2. Commensurate Wage [29 CFR, Section 525.3 (i)]

Special minimum wage paid to a worker with a disability which is based on the worker's individual productivity in proportion to the wage and productivity of experienced nondisabled workers performing essentially the same type, quality and quantity of work in the vicinity in which the individual under certificate is employed.

3. Worker with a Disability [29 CFR, Section 525.3 (d)]

A person whose earning or productive capacity is impaired by physical or mental disability, including those relating to age or injury, for the work to be performed.

Disabilities that may affect earning or productive capacity include blindness, mental illness, mental retardation, cerebral palsy, alcoholism, or drug addiction.

4. Experienced Worker [29 CFR, Section 525.3 (k)]

A worker who has learned the basic elements or requirements of the work to be performed, ordinarily by completion of a probationary or training period.

Typically, a worker will have received at least one pay raise after successful completion of the probationary or training period.

5. Vicinity [29 CFR, Section 525.3 (j)]

The geographic area from which the labor force of the community is drawn.

Minimum Wage

Federal or State Minimum Wage, whichever is higher Wage Determination Rate on all Federal Service Contracts

- D. Prevailing Wages [29 CFR, Section 525.10 (a) – (g)]
1. Must be completed annually
 2. Minimum of three firms must be surveyed
 3. Similar methods/similar equipment
 4. Cannot be below minimum wage
 5. Based on experienced nondisabled worker
 6. No specialized method for tabulating the results; can use weighted or straight average. However, methodology must be consistent.
 7. Documentation requirements [29 CFR, Section 525.10 (g)]:
 - a.) date of contact
 - b.) name, address, phone number of sources
 - c.) individual contacted
 - d.) title of individual contacted
 - e.) wage rate information provided by source
 - f.) brief description of work for wage provided
 - g.) wage obtained is for an experienced worker

Sample Prevailing Wage Survey Forms follow.

**SAMPLE LETTER: Prevailing Wage Survey
(Request for wage information)**

(NPA Letterhead)

January 15, **2007**

Ms. Joyce Patterson
Hallmark Cards
12th and Main Streets
Kansas City, Missouri 65301

Dear Ms. Patterson:

Thank you for your time during our recent telephone conversation. I sincerely appreciate your offer to complete the prevailing wage surveys that we discussed.

Enclosed are job descriptions for two positions in our Community Rehabilitation Program for which we need to establish a prevailing wage. The wage rates we need are those paid to experienced employees whom you employ, performing similar jobs or jobs that require similar skills. For our purposes, "experienced" means an individual who has completed a "probationary" or "entry" period with your firm and not necessarily the highest paid person in the particular person.

Please complete the form for those positions that are applicable to your firm and return them to me as soon as possible. I have enclosed a self-addressed, stamped envelope for your convenience.

Sincerely,

Lorraine Daily

Personnel Manager

Enclosures: Prevailing Wage Survey Forms with Job and Skill Descriptions

**PREVAILING WAGE SURVEY
Job Description Attachment**

Collating Machine
Operator

JOB TITLE

JOB DESCRIPTION: Tends automatic machine that assembles printed items in sets

Qualifications: Semi-skilled job. Requires the ability to recognize letters in alphabet and have good gross motor skills.

Skills: Must be able to operate machine. Will not involve setting of machine.

Tasks: Load printed material in machine.

Monitor operation – periodic checks on materials.

Off-loads collated sets to trays on conveyor.

PREVAILING WAGE SURVEY
Job Description Attachment

Box Maker, Cardboard
JOB TITLE

JOB DESCRIPTION: Assembles, sets up or unfolds cardboard or corrugated boxes,
Applies glue and tape to form box.

Qualifications: Unskilled job requiring some standing, walking and lifting.

Skills: Unskilled. Must be able to use hand(s) and/or jig to form
a square box. Must be physically able to lift 20 pounds.

Tasks: Obtains cartons and box stock.

Opens/unfolds box to proper configuration.

Applies glue, tape or staples at proper locations to form a box.

Inserts packing material

May apply labels, stencils and close carton after filling.

Lori Johnson
Surveyor

January 15, 2007
Date

**PREVAILING WAGE SURVEY
(Single Company/Employer Form)**

Check one of the following:

Telephone x State Job Service Study
Survey _____
Mail Survey _____ Professional Society Survey/Study _____
Other: _____

Complete the following:

Company/Employer Tension Envelope Contact: David Mertz
Name: _____
 Address: 114 Baltimore Ave. Title: Production Mgr.
 Kansas City, MO Phone: 555-1900

JOB TITLE*	ENTRY LEVEL WORKERS		EXPERIENCED WORKERS**		# Weeks in Entry Status
	Number	Wage Rate	Number	Wage Rate	
Cardboard Box Maker	2	\$7.40	4	\$8.00	52
Collating Machine Operator	1	\$7.35	2	\$7.80	52

* See attached Job Description(s) for each Job Title.

** An experienced worker is defined as one who has completed the training, probationary, temporary or other entry status and is considered a regular employee (usually employed for a minimum of six months or longer).

January 15, 2007
Date

Lori Johnson
Surveyor

January 15, 2007
Date

**PREVAILING WAGE SURVEY
(Single Company/Employer Form)**

Check one of the following:

Telephone x State Job Service Study
Survey _____
Mail Survey _____ Professional Society Survey/Study _____
Other: _____

Complete the following:

Company/Employer Hallmark Cards Contact: Shirley Manson
Name: _____
Address: 600 W. Main Street Title: Plant Supervisor
 Kansas City, MO Phone: 555-9200

JOB TITLE*	ENTRY LEVEL WORKERS		EXPERIENCED WORKERS**		# Weeks in Entry Status
	Number	Wage Rate	Number	Wage Rate	
Cardboard Box Maker	2	\$7.30	6	\$7.85	26
Collating Machine Operator	2	\$7.40	3	\$7.75	26

* See attached Job Description(s) for each Job Title.

** An experienced worker is defined as one who has completed the training, probationary, temporary or other entry status and is considered a regular employee (usually employed for a minimum of six months or longer).

January 15, 2007
Date

Cardboard Box Maker
Job Title

January 15, 2007
Date

PREVAILING WAGE SURVEY SUMMARY

This wage survey was conducted to determine the predominant wage rate paid to nondisabled persons performing the job tasks of the job title listed above. The survey information was developed from (check one):

Telephone ☒ x

State Job Service Study:

Survey:

Mail Survey:

Professional Society Survey/Study:

Other:

COMPANY/ EMPLOYER	CONTACT PERSON/TITLE AND PHONE #	ENTRY LEVEL WORKERS		EXPERIENCED WORKERS		WEIGHTE D TOTALS*
		WAGE RATE	# WORKE RS	WAGE RATE	# WORKE RS	
Ace Hardware	Don Bearman Prod. Mgr. 555-4100	\$7.35	1	\$8.30	2	\$16.60
Tension Envelope	David Mertz Prod. Mgr. 555-1900	\$7.40	3	\$8.00	4	\$32.00
Hallmark Cards	Shirley Manson Plant Super. 555-9200	\$7.30	4	\$7.85	6	\$47.10
TOTAL S					12	\$95.70
<ul style="list-style-type: none"> Weighted totals are derived from experienced workers only. 					(X)	(Y)
						\$7.975
Y/X = \$ 7.98						

Previous Rate: \$7.50

Prepared by: Lori Johnson

**Collating Machine
Operator**

Job Title

January 15, 2007

Date

PREVAILING WAGE SURVEY SUMMARY

This wage survey was conducted to determine the predominant wage rate paid to nondisabled persons performing the job tasks of the job title listed above. The survey information was developed from (check one):

Telephone ☒ Survey:

State Job Service Study:

Mail Survey: _____

Professional Society Survey/Study: _____

Other: _____

COMPANY/ EMPLOYER	CONTACT PERSON/TITLE AND PHONE #	ENTRY LEVEL WORKERS		EXPERIENCED WORKERS		WEIGHTE D TOTALS*
		WAGE RATE	# WORKE RS	WAGE RATE	# WORKE RS	
Stuart Hall	Fred Thompson Prod. Mgr. 555-7600	\$7.35	2	\$8.00	6	\$48.00
Tension Envelope	David Mertz Prod. Mgr. 555-1900	\$7.40	1	\$7.80	2	\$15.60
Hallmark Cards	Shirley Manson Plant Super. 555-9200	\$7.30	1	\$7.75	3	\$23.25
TOTAL S					11 (X)	\$86.85 (Y)
						7.894545
					Y/X = \$ 7.90	

- Weighted totals are derived from experienced workers only.

Previous Rate: \$7.25

Prepared by: Lori Johnson

III. Documentation

Why Document?

1. Liability of back wage
2. Tool for Training
3. Assessment tool
4. Operational Effectiveness
5. Placement tool
6. Serves as input for training programs

IV. Disabled for the Work

The Fair Labor Standards Act requires that if a worker with a disability is paid sub-minimum wages, documentation must be maintained to support that an individual's productivity is impaired by his or her disability.

A disability that may affect earning or productive capacity for one type of work may not affect such capacity for another.

V. What to use as documentation

- A. Disability documentation
- B. Individual Performance Evaluation Form
- C. Ongoing case notes
- D. Behavioral observations
- E. Incident reports

VI. When to Document

- A. as incidents occur
- B. at each evaluation period
- C. when time studies are completed

VII. Who should document

- A. Operations staff
- B. Rehabilitation staff

VIII. Record keeping [29 CFR, Section 525.16 (a) – (d)]

Every employer...of workers employed under special minimum wage certificates shall maintain and be available for inspection records indicating:

1. special minimum wage certificates
2. verification of the worker's disabilities
3. evidence of the productivity of each worker with a disability gathered on a continuing basis or at periodic intervals (not to exceed six months in the case of employees paid hourly wage rates)
4. the prevailing wages paid workers non disabled for the job performed who are employed in industry in the vicinity for essentially the same type of work using similar methods and equipment as those used by each worker with disabilities employed under a special minimum wage certificate
5. the production standards and supporting documentation for nondisabled workers for each job being performed by workers with disabilities employed under special certificates.

IX. Employee Rights [525.22(a)-(g)]

Any employee receiving a special minimum wage at a rate specified pursuant to subsection 14(c) of the Fair Labor Standards Act or the parent or guardian of such an employee may petition the Secretary to obtain a review of such special minimum wage rate.

X. Most frequent violations

Failure to maintain adequate records relating to time studies.

Improperly conducted time studies.

Failure to use prevailing wage rates.

Failure to base prevailing wages on the wage paid to an experienced worker and trained non-disabled employee.

Failure to maintain adequate records relating to worker productivity.

Failure to maintain adequate records for all hours worked.

Failure to obtain or renew certificate.

Failure to pay wages for assessment when assessment involved the performance of value-added production.

Failure to reflect wages when work is performed in different job categories.

Failure to adjust wages when job changes or productivity changes.

Failure to assess and measure at least every six months (not twice a year).

Failure to document conclusively disabled for the work while paying a commensurate wage.

Job Descriptions

Job Descriptions – Define the Worker

Job Description (Example) – SCA Directory of Occupations

The fourth edition of the Service Contract Act Directory of Occupations was released in 1993 and is the most current edition since the first publication in 1985. The Director provides a common vocabulary for occupations most often listed in the Service Contract Act wage determinations. It was used by procurement staff as a key time-saver in developing Service Contract Act wage determination requests. Wage and Hour staff utilize the Directory in developing and enforcing wage determinations.

Sample occupational category taken from the Fourth Edition Service Contract Act Directory of Occupations, page 53.

11150

JANITOR

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment, house, or commercial or other establishment. Duties involve a combination of the following:

Sweeping, mopping, or scrubbing, and polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; providing supplies and minor maintenance services; and cleaning lavatories, showers and restrooms.

Excluded are:

- a. Workers who specialize in window washing;
- b. Housekeeping staff that make beds and change linens as a primary responsibility;
- c. Workers required to disassemble equipment in order to clean machinery; and
- d. Workers who receive additionally compensation to maintain sterile facilities or equipment.

I. Writing a Job Description

Job descriptions should be written well and should be well documented. The person performing the job should have been given a copy of the job description. The supervisor should also have a copy of all job descriptions for the position that he or she supervises.

Writing a good job description will serve many purposes:

1. Help you understand the work that is to be performed. You will find the Statement of Work (SOW) invaluable in helping you define the work of a particular position.
2. Outline to the employee what the job entails, the responsibilities, and the authority involved with the job.
3. Form the basis of creating work and employee evaluations. It will also help you define an effective training program for this position.
4. Help your agency determine what type of person is needed for the job.
5. Be the basic building block from which you will perform time studies to generate production standards.

II. Contents of a Job Description

The formal job description should:

1. Include or reference a document that contains information about vacation, sick days, holidays, method for determining pay, conditions of employment, agency policies and regulations.
2. Indicate whom this person supervises.
3. Indicate to whom this person reports.
4. Indicate the days and times the work is performed.
5. Indicate where the work is performed.
6. List the types of skills, education, or experience required.
7. Define specific job duties, responsibilities, and tasks. (May also include the types of equipment and supplies used on the job.)
8. Include a statement about general duties and responsibilities.

SAMPLE JOB DESCRIPTION

Title: Custodial Worker

Reports to: Onsite Supervisor

Main Function: Manual labor associated with the daily cleaning of buildings. Employees in this job classification are under immediate supervision and perform various duties requiring moderate physical strength (able to lift 25 pounds). Typical duties may include some or all of the following: dust mopping, sweeping, wet mopping, dusting, cleaning restrooms, removing trash, polishing furniture, and simple operation of basic mechanical cleaning equipment.

Location: Work will be performed at the Levy Federal Building, 3319 Main Street, Podunk, Iowa. The hours of operation commence at 4:00 PM and end at approximately 11:00 PM (quitting time can vary according to variable job requirements).

Training: A comprehensive training is provided to all employees. Job assignments are made according to entry skills and/or successful completion of various elements of the training program. Entry-level job assignments will normally be within the category of routine work.

Examples of Routine Work:

Police public areas; dust mop. Sweep, spray-buff floors; may require some use of power equipment; vacuum rugs and carpets; scrub and clean restroom fixtures and keep restroom supplied with towels, soap and other items; dust and clean walls, doors, windows, woodwork and other above floor surfaces; dust, clean, and polish furniture; clean elevators and stairwells; police around outside of building; keep simple records and make simple reports, and, replace accessible light bulbs.

Information regarding vacation, hourly rate of pay and other benefits available in job application package.

Developing a Task Analysis

Developing a Task Analysis – Define the Work

To perform a time study, you must have an accurate task analysis. The task may be the complete job, but generally it will be only a part of the job. The job of a custodian may include the tasks of vacuuming, dusting, restroom cleaning, and hard floor care. Each one of these tasks will have subtasks that will need to be accomplished to complete the task. To ensure a time study is valid and reliable, capture all of the associated job tasks.

- A. A task analysis identifies:
 - 1. Tasks and subtasks to be performed
 - 2. Procedures to accomplish task
 - 3. The specific area included in the work
 - 4. Supplies and equipment necessary to perform the work
 - 5. A definite start and stop point for the job (task)
 - 6. Environmental considerations (e.g., weather condition, construction areas, heavy traffic areas, etc.)
- B. Ensure the method and task is most effective in:
 - 1. Time performance
 - 2. Quality performance
- C. The documented method of work must be used when assigning work to employees with disabilities.
- D. Documentation must be in writing.

SAMPLE TASK ANALYSIS

CLEANING A RESTROOM

While for purposes of this time study a specific restroom has been designated, it should be understood that the tasks and procedures described are considered the “best practices” and as such are identical to the methods used in training.

This task analysis includes the location, individual tasks, supplies and equipment, and the procedures for completing the task.

LOCATION: Men’s bathroom on 23rd floor of Moorehead Building, Room #367, 14 fixtures

INDIVIDUAL TASKS:

- 1 – Replenish soap supplies
- 2 – Replenish paper towels
- 3 – Replenish toilet paper supplies
- 4 – Clean/disinfect urinals and toilets
- 5 – Clean/disinfect basins
- 6 – Clean mirrors
- 7 – Empty trash
- 8 – Sweep floor
- 9 – Mop floor

SUPPLIES AND EQUIPMENT:

- 1 – Quart container of liquid dispenser soap
- 2 – One package of single-fold paper towels
- 3 – Two conventional size rolls of toilet paper
- 4 – Key for towel dispenser
- 5 – Bottle of non-acid bowl cleaner
- 6 – One pint spray bottle of disinfectant/cleaner
- 7 – One pint bottle of glass cleaner
- 8 – Premixed scrub bucket with wringer
- 9 – 16 oz. wet mop
- 10 – Standard corn broom
- 11 – Lobby dustpan
- 12 – Toilet mop
- 13 – Rubber gloves
- 14 – “Out of service” sign
- 15 – Door stop
- 16 – 50-gallon trash barrel (on maid cart)
- 17 – 30-gallon trash liners
- 18 – 3 color-coded cleaning sponges

PROCEDURES FOR CLEANING RESTROOM #367

- 1 – Fully stocked maid cart is placed at door (see “Daily Stocking of Main Cart, Attachment A”).
- 2 – Knock on door of restroom, and announce “Maintenance”. If no answer, enter with maid cart, block open door with door stopper, and place “Out of Service” sign in open doorway.
- 3 – Flush all toilets and urinals; squirt toilet bowl cleaner in each fixture,
- 4 – Check soap, paper towel, and toilet paper dispensers – replace as needed (for purposes of time study, one roll of toilet paper and one paper towel dispenser need to be restocked).
- 5 – Empty trash into container on maid cart and replace liner.
- 6 – Clean sinks, countertops and mirrors using blue sponge (see Attachment B).
- 7 – Clean toilets and urinals using toilet mop and red sponge (see Attachment C).
- 8 – Starting at the rear of restroom, sweep all debris towards door; using dustpan, dump debris into trash can on maid cart.
- 9 – Starting at rear of restroom, thoroughly mop floor to door.
- 10 – Remove “Out of Service” sign and doorstop.

ATTACHMENT A

DAILY STOCKING OF MAID CART

- 2 Spray bottles liquid deodorant
- 2 Spray bottles glass cleaner
- 2 Spray bottles disinfectant/cleaner
- 2 Squirt bottle toilet bowl cleaner
- 2 Toilet bowl swabs
- 2 Spray cans stainless steel cleaner
- 4 Pairs rubber gloves
- 4 Sponges (2 each color-coded for sink and toilet)
- 1 Putty knife
- 1 Large toothbrush
- 6 Rags (color-coded for sink and toilet)
- 1 Small utility pail
- 1 "Wet Floor" sign
- 1 "Out of Service" barricade
- 1 Kitchen broom
- 1 Lobby dustpan
- 1 Doorstopper
- 1 50-gallon barrel w/4 liners
- Dispenser keys
- 1 Mop bucket w/wringer

1 Angle brush

1 Doodlebug w/pad

2 Scrubbing brushes

2 Cans cleansing powder

At the beginning of shift, each maid cart should be inventoried and restocked.
Mop bucket should be filled with water and proper dilution of all-purpose cleaner.
Liquid deodorant can also be added to scrub water.

CLEANING SINKS, COUNTERTOPS, MIRRORS

1 – Pre-inspect sinks for stubborn stains (coffee, rust, make-up, etc.) If stains are present, remove first, then rinse sink to remove excess cleaner.

2 – Pre-inspect chrome fixtures for calcium build-up. If build-up is present, remove build-up with scrubbing brush and cleanser (do not use bowl cleaner).

3 – Spray sinks and counters with disinfectant/cleaner. Dry completely with clean dry rag.

4 – Clean mirrors and towel dispensers with glass cleaner and paper towels.

CLEANING A TOILET

- 1 – Flush toilet to remove all debris.
- 2 – Lift toilet seat to upright position.
- 3 – Squirt toilet bowl cleaner into bowl by squirting under rim of bowl.
- 4 – Use toilet swab to scrub underneath rim and down into bowl; make sure to scrub into trap.
- 5 – Tap swab on rim lightly to remove excess moisture.
- 6 – Using damp swab, scrub top of rim and bottom side of toilet seat.
- 7 – Flush toilet.
- 8 – Spray entire tank and base with disinfectant cleaner, making sure you spray the top front sides, bottom and behind toilet (from base to wall).
- 9 – Wipe area sprayed completely.

Production Standards

Establishing Production Standards – Measure the Work

The procedures and methods used when evaluating the worker's productivity should be the exact methods required on the job.

EXAMPLE (Vacuuming): If timing of the individual setting the production standard began when he or she retrieved the vacuum from the closet, timing of the actual time study should also begin at this time. The time study would not begin when the individual began to vacuum the lobby area, etc. Timing would begin when the individual retrieved the vacuum from its storage location.

EXAMPLE (Cleaning a restroom): If the production standard includes getting all necessary materials from the janitor's closet, then performing the respective tasks, timing of during the time study should begin at this time also; the time study would not begin when the individual begins cleaning the restroom.

Consistency is important because of the learning curve involved in training individuals with disabilities. The established production standard must be exactly the same way that you will assign work. All the steps used during the establishment of the production standard must be used (or at least made available) during the actual performance of the work.

I. Define and Refine the Method

Once the procedures and methods are written down, you need to go to each job site and review the procedures implemented and verify that the original procedure and method are practical. This process is to ensure the methods are part of the "best practices" and can be used for effective training procedures.

Most effective and efficient method

Job accommodation – given the janitor job description, although it includes all tasks required of a janitor, it may not be representative of the skills a worker with a disability is capable of performing due to functional limitations. For example, he or she may not be capable of operating a buffer. In that case, buffing would not be a skill the worker would be assigned to and evaluated on.

II. Time Frames and Cycles (# of Studies)

- A. The number of cycles to be timed will depend on:
 - 1. level of worker training and experience
 - 2. basic skills of worker
 - 3. length of the work cycle
- B. The shorter the time study the less valid and reliable the results.
- C. Shorter time studies may not capture all the possible variables of the job.
- D. Most effective approach:
 - 1. define the entire job or section to be completed.
 - 2. time the total elapsed time to complete the section or job.
- E. Timing methods
 - 1. continuous timing – watch runs during the entire time of study. The easiest and probably the most efficient method of timing service projects. It provides a complete record of the entire period.
 - 2. snap-back – take reading, snap back to zero. Good for piece rate time studies. Not that appropriate for hourly or lengthy time studies.
- F. Measuring “pure time”
 - actual time to perform the task.
- G. Consistent measurement of time:
 - 1. Hours, minutes and seconds
 - 2. Decimal minute (1/60 of a minute). Seconds are converted to decimal. See conversion chart following this page.

Decimal Minute Conversion Chart

Seconds	Decimal	Seconds	Decimal
1	.02	31	.52
2	.04	32	.53
3	.05	33	.55
4	.07	34	.57
5	.08	35	.58
6	.10	36	.60
7	.12	37	.62
8	.13	38	.63
9	.15	39	.65
10	.17	40	.67
11	.18	41	.68
12	.20	42	.70
13	.22	43	.72
14	.23	44	.73
15	.25	45	.75
16	.27	46	.77
17	.28	47	.78
18	.30	48	.80
19	.32	49	.82
20	.33	50	.83
21	.35	51	.85
22	.37	52	.87
23	.38	53	.88
24	.40	54	.90
25	.42	55	.92
26	.43	56	.93
27	.45	57	.95
28	.47	58	.97
29	.48	59	.98
30	.50		

III. The Operator

Often times the most experienced worker on the job is the worker with a disability. If you ever use a worker with a disability to set the production standard, that individual cannot be disabled for the work to be performed and should always be paid the full prevailing wage or Wage Determination.

A. Selecting the Operator

1. Should be a staff member or a worker who is competitive in pace with normal” or 100% productive. A worker with a disability can be used if at or close to 100% productive.
2. “Normal” is defined as:
 - qualified to do the job
 - experienced in the work
 - working in a typical work environment
 - working at an easily maintained pace

B. Operator Requirements

1. Operator must be able to perform the documented method in the same manner as detailed.
2. Operator must be able to perform the method in an efficient manner and must be able to work consistently and systematically.
3. Operator likes work and is interested in doing a good job.
4. Operator is familiar and comfortable with time study procedures and the observer.
5. Operator is cooperative.

C. Operator Experience and Training

1. The operator should always be trained.
2. Training should reflect the most effective techniques to complete the job and should teach the exact methods that will be used to perform the job.
3. The person used to set the production standard should always have their level of experience documented on the evaluation form.

IV. Timing the Elements

A. Observation guidelines

1. Position behind or to the side of the operator (never in the way but able to observe all activity).
2. Do not talk or encourage conversation.
3. Focus attention on task elements and procedures.
4. Read over elements while observing the operator; make sure elements are being followed.
5. Record or stop the watch for any lost time or interruptions.

V. Validity and Reliability

VALIDITY: The method that you are using truly does accurately measure what you want it to measure.

RELIABILITY: If you perform the time studies the same way under the same circumstances, you will get the same results.

VI. **Simulated vs. Actual**

SIMULATED: Some NPA's have a room at the agency facility where all NPA

clientele are evaluated every six months. Typically, the room is set up to capture a snapshot of how well people with disabilities clean floors, dust, and clean windows.

Simulated evaluations enable project managers to expedite the evaluation process, but the "apples to apples" elements of evaluating hourly rated workers may be severely compromised.

ACTUAL: Evaluating workers with disabilities at the actual site is strongly recommended because the onsite manager can evaluate the productivity ratings in real work situations. A time study conducted in the lobby bathroom at a downtown Federal building has the potential to be more valid than a bathroom located in a more remote location in the building.

Actual evaluations more accurately reflect the environment in which the work is being done.

VII. **Other Considerations**

A. Training needs to take into consideration ALL the elements of the task analysis.

B. Dealing with Changes

Set new productions standards if any significant methods of procedures have changed.

C. Change in Procedures

Any time the method changes due to customer request, (e.g., architectural changes

such as carpet repair, fixtures change in the restrooms following new construction, etc.) new standards need to be established.

D. Production Standard Change

If you begin using a new product (e.g., window cleaner) that was not used to set the production standards, the standard needs to be re-established.

E. Annual Review

1. Procedures and methods stated on the task analysis should be reviewed
on an annual basis to ensure they are still consistent with actual work performed.

2. An annual review of procedures and methods should include:

Date of review

Reviewer

See sample format below.

AT LEAST YEARLY, THE TASK ANALYSIS THAT ACCOMPANIES THIS STANDARD IS TO BE REVIEWED. THE BASIS FOR THE REVIEW WILL BE TO ASCERTAIN THAT THE METHODS, SUPPLIES AND EQUIPMENT REFERRED TO IN THE TASK ANALYSIS STILL REFLECT THE CURRENT JOB. IF ANY CHANGES HAVE OCCURRED, THE TASK ANALYSIS WILL BE REVISED TO REFLECT THOSE CHANGES AND THE STANDARD WILL BE RESET INCORPORATING THOSE CHANGES.

DATE OF REVIEW: _____

REVIEWER: _____

DATE OF REVIEW: _____

REVIEWER: _____

DATE OF REVIEW: _____

REVIEWER: _____

F. Pitfalls and Problems

1. Choosing an inexperienced operator
2. Choosing a “super worker” to set the standard
3. Setting loose standards
4. Not comparing Apples to Apples

Important

Personal Fatigue and Delay (PFD) [29 CFR, Section 525.12(2)(h)(ii)]

The Department of Labor has determined that PFD time is not required for hourly paid workers. Thus, no PFD factor is needed when setting production standards for hourly rates.

PFD still needs to be factored into piece rate calculations. [29CFR, Section 525.12(h)(2)(ii)].

Establishing the Production Standard

Filling Out the Time Study Standard Form

1. **Observer** – Name of the person observing the standard-setting
2. **Type of Operation** – Circle either “Total” or “Partial”. If partial, indicate the operation of which the task is a part.
3. **Task** – Describe the task being used to establish standard.
4. **Task Analysis** – Describe the steps needed to complete the task.
5. **Time Recorded in** – Indicate the unit of measure used in timings.
6. **Operator** – Name of the person(s) who performed the operation being timed.
7. **Date** – Date when the standard trials are performed.
8. **Time Required for Task (A)** – Record the amount of time it took the operator to perform the task. Review work and compare to established Quality Standards.
9. **Rework Time (B)** – Record the amount of additional time required to complete task to meet Quality Standards.
10. **Total Task Time (C)** – Sum of Time Required (A) and Rework Time (B).
11. **Net Production Standard** – Divide the total of Column C by the number of trials performed.
12. **SIGNATURE** – of the observer.

HOURLY PRODUCTION STANDARD **(Nondisabled Production Standard)**

Jane Alexander

Observer

Type of Operation (circle one): **Total** **Partial** (part of)

Clean Bathroom

Task: _____

Task Analysis: See Attached

Time Recorded in(circle one): seconds minutes decimals

		A	B	C
Operator(s)	Date	Time Required for Task	Rework Time	Total Task Time (A + B)
Joe Jones	6/10/05	68min	0	68min
Peggy Beane	6/11/05	70min	0	70min
Jacky Johnson	6/12/05	66min	0	66min
			Total Column C	204min
NET PRODUCTION STANDARD (Total Column C/ No. of Operators)				68min

SIGNATURE Jane Alexander

TAB
Measure the Worker

Evaluating Productivity – Measure the Worker

I. Three Sensitivities of Time Studies

A. Time Sensitive

1. The time that the production standard was established may be critical.
2. Many times the control of the work is not controlled by the person performing the work.

EXAMPLE: Food service line at a food service project. The time of day will affect the number of meals served, and caution must be used to ensure that the time of the time study for the worker with a disability is performed exactly during the same time frame that the production standard was set.

B. Location Sensitive

Location of the time study may be critical.

EXAMPLE: Restrooms located on two different floors may have different flows of traffic. The two restrooms will have different standards.

C. Performance Sensitive

Some jobs by their very nature must be performed at 100% and, therefore, the person assigned this job would be rated at 100%.

EXAMPLE 1: Pilot.

EXAMPLE 2: A person who accompanies another person to pick up or deliver supplies. If they are able to sit in a truck, lift and place objects in a truck, then they would be 100% for this job.

II. Communicating the Process [525.12(g)]

- A. One of the most difficult tasks of management is to explain how hourly rated production works. It is recommended that flash cards, pictures, and very basic verbal communication be used when describing what's involved with completion of a task.
- B. Verify the effectiveness of your communication style once the information conveyed.
- C. The explanation of the commensurate wage system may be necessary for any of the following individuals:
 - 1. Staff employees/caregivers
 - 2. Employee with a disability
 - 3. Employee's guardian

III. Grievance Procedure

It is recommended that procedures be in place that allow employees to voice their dissatisfaction of time study result.

IV. Frequency

- A. First thirty days.
 - 1. Initial evaluation of productivity must be made within the first 30 days after employment.
 - 2. The worker's commensurate wage must be determined.
 - 3. Results must be recorded and workers' wages adjusted accordingly no

later than the first complete pay period following the initial evaluation.

4. If wages paid during the initial evaluation period were less than the commensurate wage indicated by the evaluation, you must pay the worker for the difference in wages.

B. How often thereafter

1. Productivity must be reviewed and recorded at least every six months.
2. A review of productivity must be recorded after a worker changes jobs, and reviewed every six months thereafter.
3. Evaluations may be performed more often than every six months (e.g., weekly, monthly, every 3 months, etc.).

V. **Apples to Apples**

A. Evaluation is based on “standard procedures.”

B. The following must be the same for both the production standard and time study used to establish productivity.

1. The job should be assigned exactly the same.
2. The same tasks and equipment must be used in the same way.

C. If anything is different or anything of significance changes, then new production standards and times studies must be done.

D. Evaluations should not be conducted:

1. before a worker has had an opportunity to become familiar with the job.

2. at a time when a worker is fatigued.
3. when the worker is subject to conditions that result in less than normal productivity.

VI. Job Accommodation (20 CFR, Section 525.12(h)(2)(iii)]

- A. The way work would normally be performed is changed to make an accommodation for workers with disabilities.
- B. Accommodation for the job can sometimes affect the productivity of work.
- C. When modifications such as jigs or fixtures are made to production methods to accommodate special needs of workers with disability, additional work measurements need not be conducted where the modifications enable the workers with disabilities to perform the work or increase productivity but impede a worker without a disability.
- D. Where workers with disabilities do not have a method available to them, second work measurement should be conducted.

Calculating the Hourly Wage Using Rework

Filling out the *Rework Hourly Wage Determination Form*

1. **Employee** – Name of the employee being evaluated.
2. **Evaluator** – Person who did the actual timing and recording.
3. **Location** – Area or facility where the time study took place.
4. **Title** – of the Evaluator
5. **Date/Time** – Actual dates that the tasks were performed and time.
6. **Tasks Performed** – Brief description of the work being timed.
7. **Elapsed Time (A)** – Total time taken by the employee to complete the entire task. Work should be compared to established Quality Standards to ensure completion.
8. **Rework Time (B)** – Include amount time if needed to complete the task so that Quality Standards are met.

9. **Total Time (C)** – Add the elapsed time and the rework time to get the total time. Total Column C in the bottom row.
10. **Standard Time (D)** – The time that has been established as the Production Standard. Total Column D in the bottom row.
11. **Productivity (a) [D/C]** – Divide the total of column D (Standard Time) by the total of column C (total time) to get the productivity rating. This should be recorded in decimal format.
12. **WAGE RATE (b)** – record the current Prevailing Industry Wage or the current SCA Wage Determination Rate (for Federal service contracts).
13. **HOURLY WAGE RATE** – multiply the final productivity rating (a) by the Prevailing Industry or SCA wage (b). Always round up on this number.

Rework Hourly Wage Determination
(to determine the commensurate wage for a worker with a disability)

EMPLOYEE: John West **EVALUATOR:** Tracey Cohen

LOCATION: Federal Building **TITLE:** Project Manager

Time Recorded in(circle one): seconds minutes decimals

		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Date Time	Tasks Performed	Elapsed Time	Rework Time	Total Time (A + B)	Standard Time
7/11/05 2 pm	Clean Bathroom	98	2	100	68
7/12/05 11 am	Clean Bathroom	100	8	108	68
7/13/05 2 pm	Clean Bathroom	102	0	102	68
TOTAL				310	204
PRODUCTIVITY (D Total / C Total): Prevailing Industry Wage* or SCA Wage Determination: Hourly Wage Rate (a x b):		(a) .66			
		(b) \$ 10.58			
		\$ 6.99			

*Prevailing Industry Wage is the hourly wage paid to non-entry level, experienced workers without disabilities in the vicinity performing similar work, using similar methods and equipment and employed by similar or larger firms [FLSA14(c), §525.25]. Vicinity is defined as the

Weighted Rework Hourly Wage Determination

(to determine the commensurate wage for a worker with a disability)

Employee: John West	Evaluator: Tracy Cohen
Location: Federal Building	Title: Site Supervisor

Time Recorded in(circle one): seconds minutes decimals

Date Time	Task Performed	Elapsed Time (A)	Rework Time (B)	Total Time (A+B) (C)	Stand ar Time (D)	Task Producti vity (D/C =E)	Task Weight (F)	Weighte d Producti vity (ExF=G)
1-3-07 10 AM	Bathroom Cleaning	100 min	3 min	103 min	68 min	.66	.40	.264
1-6-07 11 AM	Mopping Hallways	80 min	4 min	84 min	42 min	.50	.30	.15
1-8-07 10 AM	Vacuum/Dus t Offices	82 min	2 min	84 min	46 min	.55	.20	.11
1-9-07 10 AM	Trashing Offices	58 min	0 min	58 min	31 min	.54	.10	.054
						Total	1	.578 (G)

Job Productivity (expressed in decimals)	.578 (G)
Prevailing Industry Wage or SCA WDR	\$10.58 (H)
Commensurate Hourly Wage (G x H)	\$ \$6.12

Note: If a straight average was calculated giving equal weight to all tasks the productivity would equal $.66+.50+.55+.54/4 \times 100 = 56.25\%$. So you can

see that giving the correct weight to each task actually made the productivity higher in this example by 1.55%.

*When weighting tasks the total must equal 1 to show 100% of job.

**Prevailing Industry Wage is the hourly wage paid to non-entry level, experienced workers without disabilities in the vicinity performing similar work, using similar methods and equipment and employed by similar or larger firms [FLSA14(c), §525.25].

Calculating the Hourly Wage with a 90-10 Format

Filling out the *90-10 Hourly Wage Determination Form*

1. **Employee** – Name of the employee being evaluated.
2. **Evaluator** – Person who did the actual timing and recording.
3. **Title** – Of the Evaluator
4. **Location** – Area or facility where the time study took place.
5. **Time Recoded in** – Indicate unit of measure used.
6. **Date and Time** – Record the actual dates and time of day that the tasks were performed and timed.
7. **Tasks Performed** – Brief description of the work being timed.
8. **Elapsed Time (A)** – Record the amount of time taken by the employee to complete the task. Include any rework time required to complete the task so that Quality Standards are met. Total Column A on the bottom row.
9. **Standard Time (B)** – Record the time that has been established as the production standard. Total Column B on the bottom row.
10. **Task Productivity (a) = (B/A)** – Divide the total of the standard times by the total of the elapsed time to get the productivity rating. Record as a decimal percent.
11. **Rating for Quantity (b)** – Multiply the total productivity (a) by .90.
12. **Rating for Quality (c)** – This number must always be .10 since the employee is required to complete the task to meet the Quality Standards (100%).
13. **Productivity (d)** – Add (b) and (c) together to get the productivity rating for the employee.
14. **Wage Rate (e)** – Record the current Prevailing Industry Wage or the current SCA Wage Determination Rate (for Federal service contracts).

15. **Hourly Wage Rate** – Multiply the final productivity rating (d) by the Prevailing Industry or SCA wage (e). Always round up on this number.

90-10 Hourly Wage Determination

(to determine commensurate wage for worker with disability for work to be performed)

EMPLOYEE: James Rotter **EVALUATOR:** Jean Scotts

LOCATION: Federal Building **TITLE:** Custodial Project Manager

Time Recorded in (circle one): seconds minutes decimals

		<u>A</u>	<u>B</u>
Date Time	Tasks Performed	Elapsed Time	Standard Time
10/25/05	Clean 1 st Floor Bathroom	100	68
10/26/05	Clean 1 st Floor Bathroom	108	68
10/30/05	Clean 1 st Floor Bathroom	102	68
TOTAL			
(B Total / A Total)		(a) .66	
(.90 x a) Rating for Quantity		(b) .594	
.10 Rating for Quality		(c) .10	
Productivity % (b + c x 100)		(d) .694	

Prevailing Industry Wage* or SCA Wage Determination:(e) \$ 10.58 /Hour

Hourly Wage Rate (d x e) = \$ 7.34 /Hour

*Prevailing Industry Wage is the hourly wage paid to non-entry level, experienced workers without disabilities in the vicinity performing similar work, using similar methods and equipment and employed by similar or larger firms [FLSA14(c), §525.10]. Vicinity is defined as the geographical area from which the labor force of the community is drawn.

Tab
Blank Forms

HOURLY PRODUCTION STANDARD **(Nondisabled Production Standard)**

_____ Observer

Type of Operation (circle one): **Total** **Partial** (part of) _____

Task: _____

Task Analysis:

Time Recorded in(circle one): seconds minutes decimals

		A	B	C
Operator(s)	Date	Time Required for Task	Rework Time	Total Task Time (A + B)
			Total Column C	
<div> NET PRODUCTION STANDARD (Total Column C/ No. of Operators) </div>				

SIGNATURE

Hourly Standard Form 10/21/04

Rework Hourly Wage Determination

(to determine the commensurate wage for a worker with a disability)

EMPLOYEE: _____ **EVALUATOR:** _____

LOCATION: _____ **TITLE:** _____

Time Recorded in(circle one): seconds minutes decimals

		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Date Time	Tasks Performed	Elapsed Time	Rework Time	Total Time (A + B)	Standard Time
TOTAL					

PRODUCTIVITY (D Total / C Total):	(a)
Prevailing Industry Wage* or SCA Wage Determination:	(b) \$
Hourly Wage Rate (a x b):	\$

*Prevailing Industry Wage is the hourly wage paid to non-entry level, experienced workers without disabilities in the vicinity performing similar work, using similar methods and equipment and employed by similar or larger firms [FLSA14(c), §525.25]. Vicinity is defined as the

TS form-rework 10/21/04

Weighted Rework Hourly Wage Determination
(to determine the commensurate wage for a worker with a disability)

Employee:	Evaluator:
Location:	Title:

Note: Indicate unit of measure in time boxes

Date Time	Task Performed	Elapse d Time (A)	Rewor k Time (B)	Total Time (A+B) (C)	Stand ard Time (D)	Task Producti vity (D/C)	*Task Weight % (E)	Weighte d Producti vity
						Total	100%	(F)

Job Productivity	(F)
Prevailing Industry Wage or SCA WDR	(G)
Commensurate Hourly Wage (F x G)	\$

*When weighting tasks the total must equal 100%.

**Prevailing Industry Wage is the hourly wage paid to non-entry level, experienced workers without disabilities in the vicinity performing similar work, using similar methods and equipment and employed by similar or larger firms [FLSA14(c), §525.25]. Vicinity is defined

Weighted Rework Form 10/21/04

90-10 Hourly Wage Determination

(to determine commensurate wage for worker with disability for work to be performed)

EMPLOYEE: _____ **EVALUATOR:** _____

LOCATION: _____ **TITLE:** _____

Time Recorded in (circle one): seconds minutes decimals

		<u>A</u>	<u>B</u>
Date Time	Tasks Performed	Elapsed Time	Standard Time
TOTAL			
Task Productivity (B Total / A Total)		(a)	
(.90 x a) Rating for Quantity		(b)	
.10 Rating for Quality		(c)	.10

Final Productivity % (b + c x 100)	(d)
-----------------------------------------------------	------------

Prevailing Industry Wage* or SCA Wage Determination:(e) \$ _____/Hour

Hourly Wage Rate (d x e) = \$ _____/Hour

*Prevailing Industry Wage is the hourly wage paid to non-entry level, experienced workers without disabilities in the vicinity performing similar work, using similar methods and equipment and employed by similar or larger firms [FLSA14(c), §525.10]. Vicinity is defined as the geographical area from which the labor force of the community is drawn.

TS form-90-10 10/21/04

Surveyor

Date

**PREVAILING WAGE SURVEY
(Single Company/Employer Form)**

Check one of the following:

Telephone

State Job Service Study

Survey

Mail Survey

Professional Society Survey/Study

Other:

Complete the following:

Company/Employer

Contact:

Name:

Address:

Title:

Phone:

JOB TITLE*	ENTRY LEVEL WORKERS		EXPERIENCED WORKERS**		# Weeks in Entry Status
	Number	Wage Rate	Number	Wage Rate	

* See attached Job Description(s) for each Job Title.

** An experienced worker is defined as one who has completed the training, probationary, temporary or other entry status and is considered a regular employee (usually employed for a minimum of six months or longer).

Job Title _____

Date _____

PREVAILING WAGE SURVEY SUMMARY

This wage survey was conducted to determine the predominant wage rate paid to nondisabled persons performing the job tasks of the job title listed above. The survey information was developed from (check one):

Telephone

State Job Service Study: _____

Survey: _____

Mail Survey: _____

Professional Society Survey/Study: _____

Other: _____

COMPANY/ EMPLOYER	CONTACT PERSON/TITLE AND PHONE #	ENTRY LEVEL WORKERS		EXPERIENCED WORKERS		WEIGHTE D TOTALS*
		WAGE RATE	# WORKE RS	WAGE RATE	# WORKE RS	
				TOTAL S	(X)	(Y)

* Weighted totals are derived from experienced workers only.

* Weighted totals are derived from experienced workers only.

NOTE: If one reported wage represents the predominant number of those engaged in the task, a weighted average is not needed.

Previous Rate:

Prepared by:

Y/X =

For additional information visit the NISH Website at:

www.nish.org